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CENTRAL FAX CENTER****DEC 20 2006**Application No.: 10/721531  
Docket No.: AD6935USNA

Page 7

**REMARKS**

As a preliminary matter, the specification is amended herein to rectify several apparent clerical or typographical errors. In particular, a misspelling and a misnumbering are corrected. The specification is also amended to further clarify that "Mod G" refers to the PVB component of the claimed compositions, and that Example 8 on page 9, newly amended to "Example 8A", which does not include a crosslinking agent, is a comparative example.

In addition, several formal amendments have been made to the claims. Specifically, the abbreviations "PVB", "PVBX" and "TPE" have been replaced throughout the claims with "polyvinylbutyral", crosslinked polyvinylbutyral" and "thermoplastic elastomer", respectively. Also, the basis for the weight percentages in claims 2, 3, 4, 9, 10 and 11 is now provided. These amendments find a basis in the claims as originally filed and in the Example section of the specification, *inter alia*. Finally, claims 6 and 13 are amended to conform more closely with traditional Markush language.

These amendments to the specification and claims are purely formal and unrelated to patentability. Consequently, they neither change the scope of the claims nor add any new matter to the application.

In addition, claims 6, 7, 8 and 13 are amended to introduce the conventional transitional term "comprises." A basis for these amendments, which are unrelated to patentability, may be found in the specification on page 6 at lines 13 to 20 and in the examples of the invention, *inter alia*. Also, claim 16 is amended, and new claim 19 is introduced herein. These changes find a basis in claims 12 and 15 as originally filed, *inter alia*. Accordingly, no new matter is introduced into the application via these amendments to the claims.

Application No.: 10/721531  
Docket No.: AD6935USNA

Page 8

Turning now to substantive matters, the final Official Action dated February 22, 2006, has rejected claims 1 to 5, 9 to 12, 15, and 17 to 18 under 35 U.S.C. § 102 as anticipated by U.S. Patent No. 6,921,791, issued to Lenox et al. (hereinafter "Lenox"). In addition, claims 1 to 18 are rejected under 35 U.S.C. § 103 as obvious over U.S. Patent No. 6,506,835, issued to Hofmann (hereinafter "Hofmann"). Finally, claims 6 to 8, 13, 14 and 16 have also been rejected as obvious over Lenox in view of Hofmann. The Advisory Action issued on July 18, 2006, did not withdraw these rejections.

These are the sole substantive reasons set forth in the final and advisory Official Actions why claims 1 to 18 should not be allowed. Applicant respectfully traverses these rejections for the reasons set forth below.

First, the claims as originally filed clearly required that the elastomeric crosslinked polyvinyl butyral be dispersed in a continuous phase of the thermoplastic elastomer composition. Applicant is amending independent claims 1, 12 and 15 herein to further clarify and emphasize this feature. A basis for these amendments may be found in the specification on page 5 at lines 6 to 16, for example. Accordingly, it is believed that these amendments are purely formal and unrelated to patentability, and that they neither change the scope of the claims nor introduce any new matter into the specification.

Nowhere in Lenox is it taught or even suggested that the thermoplastic elastomer may be a dispersion. To the contrary, in fact, the polymer blend described in Lenox **must not** be a dispersion. See, for example, Lenox in column 3 at lines to 55: "This [method] **needs to be carried out** [at] temperatures above 250°F. using conditions of shear sufficient to cause **molecular blending** and reaction of the polymeric components." [*Emphases supplied.*] Those of skill in the art are well aware that dispersions are not uniformly blended at a molecular level. Plainly, then, Lenox

Application No.: 10/721531  
Docket No.: AD6935USNA

Page 9

does not describe Applicant's claimed invention. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 102 be withdrawn upon reconsideration.

Second, the claims are not obvious over Hofman. Independent claims 1, 12 and 15, as amended, all clearly recite that a crosslinked polyvinyl butyral (PVBX) is dispersed in a thermoplastic polymer. Hoffman, however, does not describe any crosslinked polyvinyl butyrals. Moreover, newly amended process claims 12 and 15 also specifically recite that the starting material for the crosslinking reaction is a modified non-blocking PVB composition. No such composition is taught or suggested in Hoffman. Therefore, Hofmann does not teach or suggest every element of the claimed invention. Consequently, it is respectfully requested that the rejection under 35 U.S.C. § 103 citing Hofmann be withdrawn upon reconsideration.

Third, the final Official Action asserts that any thermoplastic polymer described in Lenox may be freely substituted for the polyvinyl chloride in Hofman's composition. Lenox's composition must be substantially halogen-free, however, and Hofman's composition is required to include polyvinyl chloride. See Abstracts of Lenox and Hofman. It is therefore improper to combine these two references, because each clearly teaches away from the other. See the M.P.E.P. at § 2145(X)(D)(2). Accordingly, Applicant respectfully requests that the rejection of claims 6 to 8, 13, 14 and 16 as obvious over Lenox in view of Hofman be withdrawn upon reconsideration.

In addition, claims 2 to 11, 13, 14, and 16 to 18 depend, directly or indirectly, from independent claims 1, 12, and 15. It follows by statute that the dependent claims are also not anticipated and not obvious for at least the reasons set forth above with respect to claims 1, 12 and 15. Consequently, Applicant also respectfully requests that the rejections of claims 2 to 11, 13, 14, and 16 to 18 under 35 U.S.C. §§ 102 and 103 be withdrawn upon reconsideration.

Application No.: 10/721531  
Docket No.: AD6935USNA

Page 10

It is believed that the facts and reasoning above are sufficient to overcome the rejections based on Lenox and Hofmann. In supplement, however, Applicant offers the following comments in response to several points that are raised in the final Official Action or the Advisory Action:

First, and most significantly, Applicant is in complete agreement with the statement in the Advisory Action that the doctrine pertaining to claim interpretation is well established, specifically that the Examiner must give the claims their broadest reasonable interpretation (see, e.g., the M.P.E.P. at § 2111), and that limitations from the specification must not be read into the claims (see, e.g., M.P.E.P. § 2111.01(II)).

It is similarly well established, however, that the "plain meaning" of a term refers to the meaning that is understood by those of skill in the art (see, e.g., M.P.E.P. § 2111.01(III)). Moreover,

The ordinary and customary meaning of a term may be evidenced by a variety of sources, including the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.

*(Id., emphases supplied, editorial markings and internal quotations removed, citing Phillips v. AWH Corp., 415 F.3d 1303, 1314, 75 USPQ2d 1321, 1327.)*

Accordingly, Applicants respectfully request that the definitions within the specification, the extrinsic evidence cited, and the explanations and clarifications set forth in the prosecution history be given their due weight.

In particular, Applicant recognizes that the definition of "dispersed" that is set forth in the Advisory Action is a valid definition of that term; however, it is a non-technical definition. To those of skill in the art of polymer science, when one polymer is said to be "dispersed in a continuous phase" of another polymer, the description denotes a very specific set of morphological features that are simply inconsistent with

Application No.: 10/721531  
Docket No.: AD6935USNA

Page 11

the presence of a single phase. According to the well-established doctrine that is set forth in the M.P.E.P. at § 2111.01 and summarized above, the "broadest possible meaning" of the terms in the claims should give way to the reasonable limitations that follow from the context of the specification and from the clarifications that have been proffered by the Applicant. Accordingly, Applicant respectfully requests that any rejection that is based on an erroneous construction of the term "dispersed in a continuous phase" be withdrawn upon reconsideration.

In this connection, the Advisory Action also asserts that "The term 'modifier' can include any inorganic filler." To the contrary, the specification on page 3 at lines 14 to 17 clearly states that suitable modified PVB compositions are described in U.S. Provisional Patent Appln. No. 60/224,126, to which U.S. Appln. No. 10/333,993, published as U.S. Patent Appln. Publn. No. 2003/0212203, claims priority. The provisional patent application, which is incorporated by reference into the present application, plainly states that

The present invention is a non-blocking chemically modified polyvinylbutyral (PVB) composition comprising a chemically modified PVB, wherein the modified PVB is the reaction product of unmodified polyvinylbutyral, having hydroxyl functionality, and a second component or mixture, wherein the second component reacts with at least a portion of the hydroxyl functionality of the PVB.

(Page 2 at lines 12 to 17; see also paragraph [0010] of U.S. Patent Appln. Publn. No. 2003/0212203.) Thus, consistent with the principles of claim interpretation set forth in the M.P.E.P. at § 2111.01 and discussed at length above, the meaning of the term "modified polyvinyl butyral" has been made abundantly clear in the specification. Accordingly, the presence or absence of inorganic filler in the compositions described in the cited references is simply inapposite to the patentability of the present claims. Inorganic fillers are manifestly not modifiers, in the context of the present application. Therefore, Applicant respectfully requests that any rejection that is based on this erroneous construction of the term "modifiers" also be withdrawn upon reconsideration.

Application No.: 10/721531  
Docket No.: AD6935USNA

Page 12

Finally, and still in connection with the proper construction of words in the claims, the Advisory Action has proffered European Patent No. 0 853 097, and specifically to the paragraph bridging pages 2 and 3, in response to Applicant's request for clarification of the mechanism by which copolymers of ethylene with vinyl acetate and copolymers of ethylene with alkyl (meth)acrylates may crosslink polyvinyl butyral. In fact, this response does not provide any mechanistic details at all pertaining to the crosslinking that was posited, now seemingly baselessly, in the final Official Action.

First, and as is also noted in the Advisory Action, the cited document does not in fact describe crosslinking, but rather merely describes hydrogen bonding between polar groups. Those of skill in the art are aware that crosslinking is a chemical reaction, however, and hydrogen bonding is not. As evidence of what is understood by those of skill in the art, Applicant refers to the articles in the Wikipedia entitled "Cross-link", "Hydrogen Bond", and "Chemical Reaction", all accessed on December 20, 2006, via the web address [http://en.wikipedia.org/wiki/Main\\_Page](http://en.wikipedia.org/wiki/Main_Page). Second, Applicant points to the specification on page 3 at lines 25 to 30. This is one among several portions of the specification and claims which demonstrate that Applicant's use of the term "crosslinking" is consistent with its meaning in the art.

Consequently, in accord with the principles of claim interpretation set forth in the M.P.E.P. at § 2111.01, and in light of the deficiencies of the evidence that has been supplied, Applicant respectfully requests that the rejections based on the purported description of crosslinking in Hofmann be withdrawn upon reconsideration.

### **Conclusion**

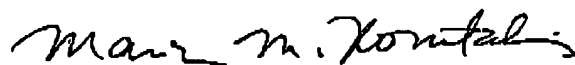
A Petition for an Extension of Time for two months and the required fee for the extension are filed concurrently herewith. Should any further fee be required in connection with the present response, the Examiner is authorized to charge such fee, or render any credit, to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Application No.: 10/721531  
Docket No.: AD6935USNA

Page 13

In view of the above amendments and remarks, and of the facts and reasoning set forth earlier in the prosecution, it is felt that all claims are in condition for allowance, and such action is respectfully requested. In closing, the Examiner is invited to contact the undersigned by telephone to conduct any business that may advance the prosecution of the present application.

Respectfully submitted,



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Dated: December 20, 2006